

## **REMARKS**

### **I. General**

Claims 1-18 are pending in the present Application. Claims 1, 8, 15, and 17 are amended herein, and claims 7 and 14 are canceled. The issues in the current Office Action dated November 09, 2007 (hereinafter Office Action) are as follows:

- Claims 1-6, 8-13 and 15 are rejected under 35 U.S.C. §101 because as being directed to non-statutory subject matter.
- Claims 1-2, 4-9 and 11-18 are rejected under 35 U.S.C. §103(a) as being unpatentable over US Patent No. 4,462,046 (hereinafter *Spight*) in view of US Patent No. 7,187,810 (hereinafter *Clune*).
- Claims 3 and 10 are rejected under 35 U.S.C. §103(a) as being unpatentable over *Spight*, as modified by *Clune*, as applied to claims 1 and 8 above, and further in view of US Patent No. 5,537,669 (hereinafter *Evans*).

Applicant hereby traverses the rejections and requests reconsideration and withdrawal in light of the remarks contained herein.

### **II. Claim Amendments**

Claims 1, 8, 15, and 17 have been amended herein. Claim 1 has been amended to incorporate the limitations of claim 7, and claim 8 has been amended to incorporate the limitations of claim 14. Thus, the amendments present no new matter, and Applicant requests the amendments be entered. Support for claim 15 can be found in FIG. 2 of the originally filed application; thus the amendment presents no new matter, and Applicant requests the amendment be entered. Claim 17 has been amended to recite “said first and second data” in order to correct a typographical error and ensure proper antecedent basis for the limitation. As such, no new matter has been added, and the scope of claim 17 has not been changed. Applicant requests the amendment to claim 17 be entered.

### **III. Claim Rejections**

#### **A. Non-Statutory Subject Matter Rejection**

On pages 7-8, claims 1-6, 8-13, and 15 are rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter. The Office Action suggests incorporating the language of claims 7 and 14 into claims 1 and 8, respectively, and similar language into claim 15. Office Action, page 7. Applicant believes the original claims to be directed to patentable subject matter but has made the suggested amendments in order to advance prosecution. Thus, Applicant request the rejections of record be withdrawn and the claims be allowed.

#### **B. 35 U.S.C. §103(a) Rejections**

On pages 8-14, claims 1-2, 4-9, and 11-18 are rejected under 35 U.S.C. §103(a) as being unpatentable over *Spight* in view of *Clune*. Applicant traverse the rejections as detailed below. However, an obviousness rejection is improper when the differences between the applied art and the claims set the claims apart from the applied art. *See United States v. Adams* 383 U.S. 39, 48 (holding that the Government erred in concluding that wet batteries are old in the art because, among other things, “the fact that the Adams battery is water-activated sets his device apart from the prior art.”) Further, “[u]nder §103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved.” *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 15 - 17 (1966). With regard to the claims rejected under 35 U.S.C. §103 in the current Application, the Office Action does not show that the claims are obvious; thus, the claim rejections should be withdrawn.

##### **1. Claims 1, 2, 4-9, and 11-16**

Claims 1, 15, and 16 recite “generating a first *metric* in accordance with the first *optically transformed light* [and] generating a second *metric* in accordance with the second *optically transformed light*” (emphasis added). Claim 8 recites “generate a first *metric* in accordance with the first *optically transformed light* [and] generate a second *metric* in accordance with the second *optically transformed light*” (emphasis added). The Office Action states that *Spight* does not disclose the limitations and instead relies on *Clune*, Figs.

2A and 2B-2, col. 11, lines 40-67, and col. 12, lines 1-29, as teaching the limitations. Office Action, pages 9-10. However, *Clune* does not appear to teach a metric generated from an optically transformed light.

The Office Action points to *Clune*'s  $F_j(u,v)$  as teaching a metric; however, *Clune*'s  $F_j(u,v)$  is not generated from an *optically* transformed light as required by the claims. Instead,  $F_j(u,v)$  is generated from  $G_j(x,y)$  which is a Laplacian of Gaussian (LoG) filtered image (Col. 11, lines 10-22), and *Clune*'s LoG filter (step 204) does not appear to be an *optical* transform. Specifically, *Clune* does not teach step 204 is performed by a transform lens; thus, step 204 does not appear to be an optical transform. Further, *Clune* teaches the image is preprocessed (202) before the image is fed into the LoG filter at step 204. Figure 2A and col. 9, lines 53-55. Because the image must be preprocessed before LoG filtering at step 204, it seems that step 202 preprocesses the image into an electrical signal, and therefore, that step 204 is an *electrical* transform rather than an *optical* transform as required by the claims. Thus, because  $F_j(u,v)$  does not appear to be generated from an *optically* transformed light as required by the claim, *Clune* does not appear to teach "generating a first *metric* in accordance with the first *optically* transformed light."

Furthermore, because the proposed modification would render *Spight*'s system unsatisfactory for its intended purpose, the suggested modification is improper. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). Without admitting *Spight*'s  $IR(x,y)$  teaches an optically transformed light, Applicant points out that the Office Action suggests placing *Clune*'s steps 210 and 216 after *Spight*'s Fourier transform lens. Office Action, page 10. In other words, the Office Action proposes placing a redundant Fourier transform in the light path of *Spight*. As such, under the Office Action's modification, the output from *Spight* (Fourier transformed light in the frequency domain) would be the input to *Clune* at steps 210 and 216. However, *Clune* appears to teach that steps 210 and 216 receive *spatial domain input*, apply a Fourier transform, and output a frequency domain output. Col. 11, lines 40-55. The proposed modification would provide steps 210 and 216 of *Clune* with a *frequency domain input*. As such, *Clune*'s steps 210 and 216 could not perform their intended functions because *Clune* would receive the *wrong input*. It follows that because *Clune* received the wrong input, *Clune* could not perform steps 210 and 216 to output its intended signal.

Thereafter, *Spight*'s beam splitter would receive an incorrect signal from *Clune*'s steps 210 and 216, making it impossible to detect if correlation exists between the object and the reference video signal. Thus, *Spight*'s invention would cease to operate at the point where *Clune*'s steps 210 and 216 were introduced. Further, it appears that steps 210 and 216 of *Clune* require an electrical input, such that placing those steps in the *light path* of *Spight* would necessarily cause inoperability. Accordingly, the suggested modification would render the *Spight* system unsatisfactory for its intended purpose thereby making the suggested modification improper.

Accordingly, because the suggested combination fails to teach each limitation of the claims and the suggested modification is improper, Applicant requests the rejections of claims 1, 8, 15, and 16 be withdrawn and the claims be allowed. Furthermore, claims 2, 4-7, 9, and 11-14 depend from claims 1 and 8 respectively, thereby inheriting the limitations therein. As such, at least for the reasons detailed above, the dependent claims recite limitations not taught or suggested by the suggested art. Thus, Applicant requests the rejections of the dependent claims be withdrawn and the claims be allowed.

## **2. Claims 17 and 18**

Claim 17 recites "a first sensor in communication with said first optical transformer to sense the optically transformed light and generate a first signal describing information of the light . . . ." For reasons explained above, the suggested combination fails to teach or suggest generating a signal from an optically transformed light. Accordingly, because the suggested combination fails to teach each limitation of claim 17 and because the suggested modification is improper, Applicant requests the rejection of record be withdrawn and claim 17 be allowed.

Furthermore, claim 18 depends from claim 17 thereby inheriting the limitations therein. As such, at least for the reasons detailed above, the dependent claim recites limitations not taught or suggested by the cited art. Thus, Applicant requests the rejection of the dependent claim be withdrawn and the claim be allowed.

**C. Claims 3 and 10**

On pages 14-16, claims 3 and 10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Spight*, as modified by *Clune*, as applied to claims 1 and 8 above, and further in view of *Evans*. Claims 3 and 10 depend from claims 1 and 8 respectively thereby inheriting the limitations therein. As such, at least for the reasons detailed above, the dependent claims recite limitations not taught or suggested by *Spight* in view of *Clune*. Furthermore, the Office Action does not rely on *Evans* to cure these deficiencies; thus, the cited combination fails to teach each limitation of the claims. Further, as explained above, the combination of *Spight* in view of *Clune* is improper; therefore, the combination of *Spight* in view of *Clune* in further view of *Evans* is likewise improper. Accordingly as the combination fails to teach or suggest the claims and is improperly combined, Applicant requests the rejections of the dependent claims be withdrawn and the claims be allowed.

**D. *Spight***

The Office Action rejects claims 1-18 under 35 U.S.C. §103 as being unpatentable over *Spight* in view of at least *Clune*; however, the Office Action presents arguments that *Spight* teaches each limitation of independent claims 1, 8, 15, and 16. Office Action, pg. 2-3. According to *John Deere*, “[u]nder §103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved.” *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 15 - 17 (1966) (emphasis added). As such, the Office Action is violating *John Deere* by arguing that *Spight* teaches each limitation of the claims; thus, the obviousness rejection is improper. Further, it appears that the addition of *Clune* in the 35 U.S.C. §103 rejection is a concession by the Office Action that *Spight*, indeed, does not teach all features of the claims. In the present Amendment, Applicant has only addressed the 35 U.S.C. §103 rejections because the §103 rejections are the only art rejections of record. Should the Office disagree and persist in asserting that *Spight* teaches all the features of the claims, Applicant respectfully requests the Office to make such a rejection in a new, non-final office action.

#### IV. Conclusion

In view of the above, Applicant believes the pending application is in condition for allowance.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 06-2380, under Order No. 46030/P044US/10407181 from which the undersigned is authorized to draw.

Dated: February 8, 2008

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being transmitted via the Office electronic filing system in accordance with § 1.6(a)(4).  
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